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(21) International Application Number: PCT/US00/12528 (22) International Filing Date: 8 May 2000 (08.05.00) (30) Priority Data: 60/133,371 10 May 1999 (10.05.99) US (71) Applicant (for all designated States except US): PRINCETON UNIVERSITY [US/US]; New South Building, 5th Floor, P.O. Box 36, Princeton, NJ 08544-0036 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): TSIEN, Joe, Z. [US/US]; Princeton, NJ 08544 (US). (74) Agent: REED, Janet, E.; Saul Ewing Remick & Saul LLP, Cen- tre Square West, 38th floor, 1500 Market Street, Philadel- phia, PA 19102-2186 (US).			(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: COMPOSITIONS AND METHODS FOR IMPROVING LEARNING AND MEMORY			
(57) Abstract  Disclosed are methods and an animal model for improving learning or memory in a subject, for treating learning and memory-related degenerative disease in a patient in need of such treatment, for identifying novel agents capable of regulating learning and memory, and for identifying genes involved in biological processes related to learning and memory. The methods and animal model system of the invention utilize the inventor's discovery that improvement of NMDA receptor function, in particular by increased expression of NR2B in the brain, enhances synaptic plasticity and improves learning and memory.			

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